Probabilistic Genotyping
Webcast (Part 2)
September 18, 2014

Concluding Thoughts

Michael Coble

National Institute of Standards and Technology

Goals of these two webcasts

- An overview of the need for probabilistic approaches for complex, low level mixtures.

- Thoughts on why **practitioners** have moved (or are in the process of moving) to probabilistic software solutions.

Some Semi-Continuous Examples

- LR mix (Haned and Gill)

- Balding (likeLTD - R program)

- FST (NYOCME, Mitchell *et al.*)

- Kelly *et al.* (University of Auckland, ESR)

- Lab Retriever (Lohmueller, Rudin and Inman)

- Armed Expert (NicheVision)

- Puch-Solis *et al.* (LiRa and LiRaHT)

- GenoProof Mixture (Qualitype)

Some Continuous Model Examples

- TrueAllele (Cybergenetics)
- STRmix (ESR [NZ] and Australian collaboration)
- DNA-View Mixture Solution (Charles Brenner)
- DNAmixtures (Graversen 2013a,b) – open source, but requires HUGIN.

Concluding Thoughts

- All of the probabilistic software programs use the Likelihood Ratio to evaluate the evidence.

CPI/RMP Rock

Probabilistic Genotyping Rock

CPI/RMP Rock

Likelihood Ratio Rock

Probabilistic Genotyping Rock

Concluding Thoughts

- All of the probabilistic software programs use the Likelihood Ratio to evaluate the evidence.

- Understand your system!

- Reach out to colleagues in the community who have already made that leap!

- Don't be afraid to reach out to the developers!

This Webcast

- Will be archived for at least 6 months (approximately 1 week from now).

- Give us feedback on topics for future webcasts.

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Future Webcast

Save the Date!
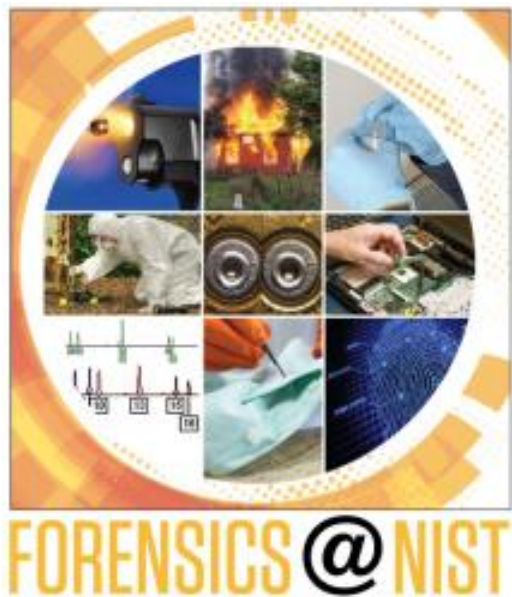
FORENSICS @ NIST

2014

Dec. 3rd and 4th

Biometrics/Computer Forensics
DNA
Firearms/Toolmarks
Statistical Measurements

Interest in Probabilistic Software

Almost Everything You Wanted to Know About Probabilistic Software (But Were Afraid to Ask)

Workshop Chairs:

- Charlotte Word
- Michael Coble (National Institute of Standards and Technology)

ISHI INTERNATIONAL SYMPOSIUM ON HUMAN IDENTIFICATION
PHOENIX, AZ • SEP. 29–OCT. 2, 2014

Additional Speakers:

- Dr. Charles Brenner (DNA-VIEW & UC Berkeley): DNA-VIEW Mixture Solution
- Dr. David Balding (UCL Genetics Institute): LikeLTD
- Dr. Roberto Puch-Solis (LGC Forensics): LiRa and LiRaHt
- Dr. Norah Rudin (SCIEG): Lab Retriever
- Dr. Hinda Haned (Netherlands Forensic Institute): LRmix.studio
- Luigi Armogida (NicheVision): ArmedXpert™
- Jo-Anne Bright (ESR Ltd): STRmix™
- Dr. Mark Perlin (Cybergenetics): TrueAllele® Casework

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